

**Notice of Allowability**

Application No.

10/725,432

Examiner

DJENANE M. BAYARD

Applicant(s)

YI ET AL.

Art Unit

2444

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/27/09.
2. ☒ The allowed claim(s) is/are 1, 3-10, 13-17, 20-22.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_.
- Identifying Indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date \_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_.

### EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Stuart Lee on 1/12/10.

The application has been amended as follows:

1. (previously presented): A user interface conversion system comprising a processor which comprises a gateway wherein an integrated user interface is generated based on neutral user interfaces of devices residing on a home network and converted into a specific user interface suitable for a specific client of a user, wherein the gateway requests a control device to transmit a neutral user interface selected by the user from the integrated user interface, said user selecting said neutral user interface corresponding to a device which the user desires to control among the devices residing on the home network, wherein the control device transmits the selected neutral user interface to the gateway, wherein the gateway converts the transmitted neutral user interface into a device specific user interface which is suitable for the specific client of the user, and wherein the user controls operation of the device using the device specific user interface [..],  
and wherein the gateway comprises:

a device collection unit for collecting the devices including the neutral user interfaces residing on the home network;

a device database for storing information on the devices collected by the device collection unit;

an integrated user interface generator for generating the integrated user interface based on the information on the devices stored in the device database; and

a user interface conversion unit for converting the integrated user interface generated from the integrated user interface generator into the specific user interface suitable for the specific client of the user.

2 (canceled).

3. (amended): The system as claimed in claim [[2]] 1, the gateway further comprising a protocol unit that supports a protocol for searching for a one device residing on the home network.

4. (amended): The system as claimed in claim [[2]] 1, wherein the information on the devices stored in the device database is meta information on the devices and URL information for accessing the neutral user interfaces.

5. (amended): The system as claimed in claim [[2]] 1, wherein the integrated user interface is described with the neutral user interfaces, wherein the integrated user interface is converted into at least the specific user interface of a plurality of specific user interfaces.

6. (previously presented): A user interface conversion system supporting various devices, comprising: a control device for controlling predetermined devices residing on a home network;

and a processor comprising a gateway for generating an integrated user interface based on neutral user interfaces of the devices residing on the home network at the request of a user for controlling the devices and converting the generated integrated user interface into a specific user interface supported in a specific client of the user, wherein the gateway requests the control device to transmit a neutral user interface selected by the user from the integrated user interface, said user selecting said neutral user interface corresponding to a device which the user desires to control among the devices residing on the home network, wherein the control device transmits the selected neutral user interface to the gateway, wherein the gateway converts the transmitted neutral user interface into a device specific user interface which is suitable for the specific client of the user, and wherein the user controls operation of the device using the device specific user interface [(.)] , and wherein the gateway comprises:

a device collection unit for collecting the devices including the neutral user interfaces residing on the home network;

a device database for storing information on the devices collected by the device collection unit;

an integrated user interface generator for generating the integrated user interface based on the information on the devices stored in the device database; and

a user interface conversion unit for converting the integrated user interface generated from the integrated user interface generator into the specific user interface suitable for the specific client of the user.

10. (amended): A user interface conversion method supporting various devices, comprising:

- (a) requesting, by a user, for a user interface supported in a user's own client;
- (b) transmitting neutral user interfaces collected at the request of the user for the user interface;
- (c) generating an integrated user interface based on the transmitted neutral user interfaces;
- (d) converting the integrated user interface into a specific user interface supported in the client of the user;
- (e) transmitting the converted specific user interface to the client of the user;
- (f) displaying the integrated user interface converted into the specific user interface on the client of the user;
- (g) selecting a device which is desired to be controlled among devices residing on a home network from the integrated user interface displayed on the client; and
- (h) controlling operation of the selected device,

wherein (g) comprises:

- (g1) requesting a neutral user interface of the selected device;
- (g2) receiving the neutral user interface of the selected device; and
- (g3) converting the received neutral user interface into a device specific user interface which is suitable for the client of the user[.], and

wherein (b) further comprises:

requesting an integrated user interface generator to transmit the neutral user interfaces at the request of the user, by a user interface conversion unit;

requesting a device collection unit to transmit the neutral user interface collected therein by the integrated user interface generator; and retrieving the neutral user interface collected in a device database by the device collection unit.

11 (canceled).

17. (amended): A computer-readable recording medium for recording a computer program code for enabling a computer to provide a service of converting interfaces in supporting various devices, the service comprising:

- (a) requesting, by a user, for a user interface supported in a user's own client;
- (b) transmitting neutral user interfaces collected at the request of the user for the user interface;
- (c) generating an integrated user interface based on the transmitted neutral user interfaces;
- (d) converting the integrated user interface into a specific user interface supported in the client of the user;
- (e) transmitting the converted specific user interface to the client of the user;
- (f) displaying the integrated user interface converted into the specific user interface on the client of the user;

(g) selecting a device which is desired to be controlled among devices residing on a home network from the integrated user interface displayed on the client; and

(h) controlling operation of the selected device,

wherein (g) comprises:

(g1) requesting a neutral user interface of the selected device;

(g2) receiving the neutral user interface of the selected device; and

(g3) converting the received neutral user interface into a device specific user interface which is suitable for the client of the user[[]], and

wherein (b) further comprises:

requesting an integrated user interface generator to transmit the neutral user interfaces at the request of the user, by a user interface conversion unit;

requesting a device collection unit to transmit the neutral user interface collected therein by the integrated user interface generator; and retrieving the neutral user interface collected in a device database by the device collection unit.

18 (canceled).

The following is an examiner's statement of reasons for allowance: Claim 1 distinguishes itself over the prior art of record by teaching an integrated user interface that is generated based on a neutral user interfaces of devices residing on a home network and converted into a specific user interface suitable for a specific client of a user. The neutral user interface of a control

device is selected by the user from the integrated user interface and transmitted to the user, The user selects the neutral user interface corresponding to a device which the user desires to control among the devices residing on the home network and the neutral user interface is converted into a device specific user interface which is suitable for the specific client of the user, and wherein the user controls operation of the device using the device specific user interface.

Although prior art system exist that allow for the conversion of interface over a network, these prior art system do not support the conversion system as described in the present invention. Furthermore, the prior art gives no indication that it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to create a conversion system in this manner.

Claims 6, 7, 10, 14 and 17 recite limitation similar to claim 1 and are allowed for the reasons given above.

Claims 3-5, 8-9, 13, 15-16 and 20-22 are allowed due to their dependence on the independent claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DJENANE M. BAYARD whose telephone number is (571)272-3878. The examiner can normally be reached on Monday- Friday 5:30 AM- 3:00 PM..



If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Jr Vaughn can be reached on (571) 272-3922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Djenane M Bayard/  
Examiner, Art Unit 2444